

WHAT IS CLAIMED IS:

1. A lens apparatus interchangeably attached to an imaging apparatus having an image pickup device, said lens apparatus comprising:

an imaging optical unit having a movable optical component for changing a focal length;

a memory in which information of an optical performance of said imaging optical unit corresponding to the focal length of said imaging optical unit is stored; and

a controller,

wherein said controller takes out the information of the optical performance corresponding to the focal length from said memory in response to an instruction from said imaging apparatus, and transmits the information to said imaging apparatus.

2. A lens apparatus according to Claim 1,

wherein said information of the optical performance is information of an optical resolution performance for each focal length of said imaging optical unit.

3. A lens apparatus according to Claim 1,

wherein said information of the optical performance is information of an effective image circle for each focal length of said imaging optical unit.

4. A lens apparatus interchangeably attached to an imaging apparatus having an image pickup device, said lens apparatus

comprising:

an imaging optical unit;

a light quantity adjusting unit disposed on an optical path of said imaging optical unit, said light quantity adjusting unit changing a light quantity by changing an aperture diameter;

a memory in which information of an optical performance of said imaging optical unit corresponding to the aperture diameter of said light quantity adjusting unit is stored; and

a controller,

wherein said controller takes out the information of the optical performance corresponding to the aperture diameter from said memory in response to an instruction from said imaging apparatus, and transmits the information to said imaging apparatus.

5. A lens apparatus according to Claim 4,

wherein said information of the optical performance is information of an optical resolution performance of said imaging optical unit for each aperture diameter of said light quantity adjusting unit.

6. A lens apparatus according to Claim 4,

wherein said information of the optical performance is information of an effective image circle of said imaging optical unit for each aperture diameter of said light

quantity adjusting unit.

7. An imaging apparatus to which a lens apparatus having a memory in which information of an optical performance is stored is interchangeably attached, said imaging apparatus comprising:

an image pickup device imaging a subject image from said lens apparatus; and

a controller changing an information size of image information from said image pickup device,

wherein said controller changes the information size of the image information in accordance with the information of the optical performance of said lens apparatus.

8. An imaging apparatus according to Claim 7,

wherein said information of the optical performance is information of an optical resolution performance of said imaging optical unit.

9. An imaging apparatus according to Claim 7,

wherein said information of the optical performance is information of an effective image circle of said imaging optical unit.

10. An imaging apparatus according to Claim 7,

wherein said changing of the information size of the image information by said controller is performed by changing an image plane size of the image information.

11. An imaging apparatus according to Claim 7,

wherein said changing of the information size of the image information by said controller is performed by changing a compression rate of the image information.

12. An optical apparatus comprising an imaging apparatus and a lens apparatus interchangeably attached to said imaging apparatus, said imaging apparatus and said lens apparatus each having a communicating portion performing communications between said imaging apparatus and said lens apparatus, said optical apparatus comprising:

an imaging optical unit;

a memory in which information of an optical performance of said imaging optical unit is stored;

an image pickup device imaging a subject image from said imaging optical unit;

an imaging controller changing an information size of image information from said image pickup device; and

a lens controller connected to said imaging controller through said communicating portions and performing communications with said imaging controller,

wherein said lens controller takes out the information of the optical performance from said memory in response to an instruction from said imaging controller, and transmits the information to said imaging controller through said communicating portions, and

wherein said imaging controller changes the information

size of the image information in accordance with the information of the optical performance from said lens controller.

13. An optical apparatus according to Claim 12,

wherein said information of the optical performance is information of an optical resolution performance of said imaging optical unit.

14. An optical apparatus according to Claim 12,

wherein said information of the optical performance is information of an effective image circle of said imaging optical unit.

15. An optical apparatus according to Claim 12,

wherein said changing of the information size of the image information by said controller is performed by changing an image plane size of the image information.

16. An optical apparatus according to Claim 12,

wherein said changing of the information size of the image information by said controller is performed by changing a compression rate of the image information.

17. An optical apparatus according to Claim 12, further comprising a display displaying information showing the image information and the information size.

18. An optical apparatus according to Claim 17,

wherein said information showing the information size displayed on said display is information of a value

converted to a 135 film format.

19. An optical apparatus comprising an imaging apparatus and a lens apparatus interchangeably attached to said imaging apparatus, said imaging apparatus and said lens apparatus each having a communicating portion performing communications between said imaging apparatus and said lens apparatus, said optical apparatus comprising:

an imaging optical unit;

a light quantity adjusting unit disposed on an optical path of said imaging optical unit, said light quantity adjusting unit changing a light quantity by changing an aperture diameter;

a lens controller changing the aperture diameter of said light quantity adjusting unit;

a memory in which information of an optical performance of said imaging optical unit is stored;

an image pickup device imaging a subject image from said imaging optical unit; and

an imaging controller connected to said lens controller through said communicating portions and performing communications with said lens controller,

wherein said lens controller takes out the information of the optical performance from said memory in response to an instruction from said imaging controller, and transmits the information to said imaging controller through said

communicating portions,

wherein said imaging controller sets an operation range of the aperture diameter of said light quantity adjusting unit in accordance with the information of the optical performance from said lens controller, and transmits information of the set operation range to said lens controller through said communicating portions, and

wherein said lens controller changes the aperture diameter of said light quantity adjusting unit based on information of the set operation range from said imaging controller.

20. An optical apparatus according to Claim 19,

wherein said information of the optical performance is information of an optical resolution performance of said imaging optical unit.

21. An optical apparatus comprising an imaging apparatus and a lens apparatus interchangeably attached to said imaging apparatus, said imaging apparatus and said lens apparatus each having a communicating portion performing communications between said imaging apparatus and said lens apparatus, said optical apparatus comprising:

an imaging optical unit;

a memory in which information of an optical performance of said imaging optical unit is stored;

an image pickup device imaging a subject image from

said imaging optical unit;

a selecting portion for selecting an information size of image information from said image pickup device, said selecting portion having an operation member and selecting the information size corresponding to an operation of said operation member;

a display displaying information showing the image information and the information size;

an imaging controller changing the information size of the image information from said image pickup device; and

a lens controller connected to said imaging controller through said communicating portions and performing communications with said imaging controller,

wherein said lens controller takes out the information of the optical performance from said memory in response to an instruction from said imaging controller, and transmits the information to said imaging controller through said communicating portions, and

wherein said imaging controller compares the information size of the image information selected by said selecting portion with an information size of the image information corresponding to the information of the optical performance from said lens controller, and when the selected information size is larger than the information size corresponding to the information of the optical performance,

provides an indication of a warning on said display.

22. An optical apparatus according to Claim 21,

wherein said information of the optical performance is information of an optical resolution performance of said imaging optical unit.

23. An optical apparatus according to Claim 21,

wherein said information of the optical performance is information of an effective image circle of said imaging optical unit.

24. An optical apparatus according to Claim 21,

wherein said changing of the information size of the image information by said imaging controller is performed by changing an image plane size of the image information.

25. An optical apparatus according to Claim 21,

wherein said changing of the information size of the image information by said imaging controller is performed by changing a compression rate of the image information.

26. An optical apparatus comprising an imaging apparatus and a lens apparatus interchangeably attached to said imaging apparatus, said imaging apparatus and said lens apparatus each having a communicating portion performing communications between said imaging apparatus and said lens apparatus, said optical apparatus comprising:

an imaging optical unit;

a memory in which information of an optical performance

of said imaging optical unit is stored;

an image pickup device imaging a subject image from said imaging optical unit;

a selecting portion for selecting an information size of image information from said image pickup device, said selecting portion having an operation member and selecting the information size corresponding to an operation of said operation member;

a display displaying information showing the image information and the information size;

an imaging controller changing the information size of the image information from said image pickup device; and

a lens controller connected to said imaging controller through said communicating portions and performing communications with said imaging controller,

wherein said lens controller takes out the information of the optical performance from said memory in response to an instruction from said imaging controller, and transmits the information to said imaging controller through said communicating portions, and

wherein said imaging controller compares the information size of the image information selected by said selecting portion with an information size of the image information corresponding to the information of the optical performance from said lens controller, and when the selected

information size is smaller than the information size corresponding to the information of the optical performance, changes the information size of the image information based on the selected information size.

27. An optical apparatus according to Claim 26,

wherein said information of the optical performance is information of an optical resolution performance of said imaging optical unit.

28. An optical apparatus according to Claim 26,

wherein said information of the optical performance is information of an effective image circle of said imaging optical unit.

29. An optical apparatus according to Claim 26,

wherein said changing of the information size of the image information by said imaging controller is performed by changing an image plane size of the image information.

30. An optical apparatus according to Claim 26,

wherein said changing of the information size of the image information by said imaging controller is performed by changing a compression rate of the image information.

31. An optical apparatus comprising an imaging apparatus and a lens apparatus interchangeably attached to said imaging apparatus, said imaging apparatus and said lens apparatus each having a communicating portion performing communications between said imaging apparatus and said lens

apparatus, said optical apparatus comprising:

an imaging optical unit;

a memory in which information of an optical performance of said imaging optical unit is stored;

an image pickup device imaging a subject image from said imaging optical unit;

a recording portion on which image information from said image pickup device is recorded;

an imaging controller changing an information size of the image information recorded on the recording portion;

a display displaying information showing the image information and the information size; and

a lens controller connected to said imaging controller through said communicating portions and performing communications with said imaging controller,

wherein said lens controller takes out the information of the optical performance from said memory in response to an instruction from said imaging controller, and transmits the information to said imaging controller through said communicating portions,

wherein said imaging controller changes the information size of the image information recorded on the recording portion in accordance with the information of the optical performance from said lens controller, and

wherein said imaging controller displays the image

information of the changed information size and information showing the information size on said display.

32. An optical apparatus according to Claim 31,

wherein said information of the optical performance is information of an optical resolution performance of said imaging optical unit.

33. An optical apparatus according to Claim 31,

wherein said information of the optical performance is information of an effective image circle of said imaging optical unit.

34. An optical apparatus according to Claim 31,

wherein said changing of the information size of the image information by said imaging controller is performed by changing an image plane size of the image information.

35. An optical apparatus according to Claim 31,

wherein said changing of the information size of the image information by said imaging controller is performed by changing a compression rate of the image information.

36. An optical apparatus according to Claim 31,

wherein said information showing the information size displayed on said display is information converted to a 135 film format.

37. An optical apparatus comprising an imaging apparatus and a lens apparatus interchangeably attached to said imaging apparatus, said imaging apparatus and said lens

apparatus each having a communicating portion performing communications between said imaging apparatus and said lens apparatus, said optical apparatus comprising:

an imaging optical unit;

a memory in which information of an optical performance of said imaging optical unit is stored;

an image pickup device imaging a subject image from said imaging optical unit;

a vibration detector detecting a vibration of said optical apparatus;

an imaging controller performing image vibration compensation by shifting a reading position of image information from said image pickup device in accordance with an output from said vibration detector; and

a lens controller connected to said imaging controller through said communicating portions and performing communications with said imaging controller,

wherein said lens controller takes out the information of the optical performance from said memory in response to an instruction from said imaging controller, and transmits the information to said imaging controller through said communicating portions, and

wherein said imaging controller changes an amount of a permissible range in which the reading position of the image information is shiftable, in accordance with the information

of the optical performance from the lens controller.

38. An optical apparatus according to Claim 37,

wherein said information of the optical performance is information of an effective image circle of said imaging optical unit.